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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Christopher M. Look

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EXAMINER

LEUNG, WAI LUN

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/785,618	Applicant(s) LOOK, CHRISTOPHER M.	
	Examiner DANNY W. LEUNG	Art Unit 2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/19/2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/19/2008 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5, 9-15, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kumozaki et al.** (US006771908B2), in view of **Eijk et al.** (US006771908B2).

Regarding claim 13, **Kumozaki** discloses An apparatus (*fig 15, 102*), comprising:
a first optical equipment (*fig 15, transceiver 110*) in an optical network device having a first plurality of input ports (*fig 15, ports on the left and on the bottom of transceiver 110*), and a first plurality of output ports (*fig 15, ports on the right of transceiver 110*);
a second optical equipment (*fig 15, transceiver 120*) in the optical network device having a second plurality of input ports (*fig 15, ports on the left and on the bottom of transceiver 120*), and a second plurality of output ports (*fig 15 ports on the right of transceiver 120*), the second optical equipment being a protection module of the first optical equipment;

a plurality of optical signal switches (*fig 15, switch 130 and 140*), each of the plurality of the optical signal switches coupled to one of the first plurality of output ports and one of the second plurality of output ports (*fig 15, port a of switches 130 and 140 is connected to transceiver 110; port b of switches 130 and 140 is connected to transceiver 120*), to select a first output optical signal from the first optical equipment (*col 20, ln 25-30; when there is no malfunction, the switching member is switched to the port a*), wherein a respective optical signal switch switches to select a second output optical signal from the second optical equipment if the first output optical signal fails and the second output optical signal has not failed, wherein the plurality of optical signal switches are switched together substantially simultaneously (*col 20, ln 35-40, when signal from fiber 200 or transceiver 110 has failed, the switches are switched over to the port b*). Although **Kumozaki** does not disclose expressly having a signal selection state of the respective optical signal switch remains unchanged to continue selecting the first output optical signal to output in the same direction if both the first output optical signal and the second output optical signal fail, however, it would have been obvious for a person of ordinary skill in the art at the time when the invention was made to have a signal selection state of the respective optical signal switch remain unchanged if both the first output optical signal and the second output optical signal fail, since if both signals have failed, there would be no reason to change the state of the switch, because doing so would not recover the optical signal. **Kumozaki** does not expressly teaches a plurality of optical signal splitters, each of the plurality of optical signal splitters coupled to one of the first plurality of input ports and one of the second plurality of input ports, to split an incoming optical signal into a first and a second optical signals and to input to the first and the second optical equipments, respectively.

Eijk, from the same field of endeavor, teaches a plurality of optical signal splitters, each of the plurality of optical signal splitters (*fig 5, element 508 contains 4 optical splitters*), coupled to one of the first plurality of input ports and one of the second plurality of input ports, to split an incoming optical signal into a first and a second optical signals and to input to the first and the second optical equipments, respectively (*fig 5, the splitter splits signal to the first equipment 504 and second protection equipment 506*). Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to use a plurality of splitters onto **Kumozaki's** system as suggested by **Eijk**. The motivation for doing so would have been to have more flexibility in routing optical signal over a plurality of nodes.

Regarding claim 19, **Kumozaki** further teaches a system comprising a plurality of optical fibers (*fig 15, 201, 202, 221, 222, 200, 220*), and a plurality of optical nodes coupled to each other via the plurality of optical fibers (*fig 15, node 303, 403, 102*), each of the plurality of optical nodes comprising the apparatus as discussed above in claim 13. Therefore, it would have been obvious for a person of ordinary skill in the art at the time of the invention was made to combine **Kumozaki and Eijk** for the same reason as stated above regarding claim 13.

Regarding claim 1, **Kumozaki** further teaches declaring a failure of the optical network node if only one of the first and the second outgoing optical signal has failed (*col 20, ln 59-66; when a problem occur, a "cut off" or "many errors" signal will be sent as an alarm*), in addition to the method steps limitations that can be performed by apparatus of the combination of **Kumozaki and Eijk** as discussed above in claim 13. Therefore, it would have been obvious for a person of ordinary skill in the art at the time of the invention was made to combine **Kumozaki and Eijk** for the same reason as stated above regarding claim 13.

As to claim 9, it would have been obvious for a person of ordinary skill in the art at the time when the invention was made to use a machine-accessible medium that stores instructions, which, if executed by a processor, will cause the processor to perform the operations of method steps of claim 1 as taught by **Kumozaki and Eijk**.

As to claims 2 and 10, **Kumozaki** further teaches bypassing the first optical equipment if the first optical signal has failed and the second optical signal has not failed (*col 20, ln 35-40*); and it would have been obvious for a person of ordinary skill in the art at the time when the invention was made to bypass the second optical equipment if the second optical signal has failed and the first optical signal has not failed (*it is obvious to switch to a working equipment and bypassing a failed equipment so as to maintain system operation*).

As to claims 14 and 20, **Kumozaki** further teaches wherein the optical signal switch selects the second output optical signal from the second optical equipment if the first output optical signal from the first optical equipment fails and the second output optical signal from the second optical equipment has not failed (*col 20, ln 35-40*).

As to claim 15 and 21, it would have been obvious to have the optical signal switch selects the first output optical signal from the first optical equipment if the second output optical signal from the second optical equipment fails and the first output optical signal from the first optical equipment has not failed (*it is obvious to switch to a working equipment from a failed equipment*).

As to claim 3 and 11, **Kumozaki** further teaches sending an alarm if either the first or the second optical signal has failed (*col 20, ln 59-66; when a problem occur, a "cut off" or "many errors" signal will be sent as an alarm*).

As to claims 4 and 12, **Eijk** further teaches declaring a failure has occurred outside of the optical network node if both the first and second optical signals have failed (*col 12, ln 44-52*).

As to claim 5, it is common and well known to use amplifiers anywhere in an optical system, so as to improve signal quality along the optical signal transmission line, therefore, it would have been obvious for a person of ordinary skill in the art at the time when the invention was made to use an amplifier for amplifying the first and the second optical signals at the first and second equipments, respectively, and the result of which would have been predictable.

4. Claims 6-8, 16-18, and 22-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Kumozaki et al.** (*US005539564A*), in view of **Eijk et al.** (*US006771908B2*), as applied to claims 1, 13, and 19 above, and further in view of **Kuroyanagi et al.** (*US006433900B1*).

Regarding claims 6, 16, and 22, **the combination of Kumozaki and Eijk** discloses the limitations in accordance to claims 1, 13, and 19 as discussed above. **It** does not disclose expressly wherein each of the first and second equipments comprises a wavelength switch module. **Kuroyanagi**, from the same field of endeavor, teaches a first and second optical equipment in an optical network device, the second optical equipment being a protection module of the first optical equipment, wherein each of the first and second equipments comprises a wavelength switch module (*fig 8A, optical XC node in 1-system and 0-system*). Therefore, it would have been obvious for a person of ordinary skill in the art at the time of invention to

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substitute a wavelength switch modules onto **the combination of Kumozaki and Eijk's** system as the first and second optical equipment suggested by **Kuroyanagi**, and the results of the substitution would have been predictable to one of ordinary skill in the art. see *KSR*

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As to claims 7, 17, and 23 , **Kuroyanagi** further teaches wherein each of the first and second equipments further comprises a multiplexer and a de-multiplexer (*fig 8A*).

As to claims 8, 18, and 24, it is common and well known to use amplifiers anywhere in an optical system, so as to improve signal quality along the optical signal transmission line, therefore, it would have been obvious for a person of ordinary skill in the art at the time when the invention was made to use and amplifier for amplifying the first and the second optical signals at the first and second equipments, respectively, and the result of which would have been predictable.

Response to Arguments

5. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record in previous actions and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANNY W. LEUNG whose telephone number is (571)272-5504. The examiner can normally be reached on 11:30am-9:00pm Mon-Thur.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Vanderpuye can be reached on (571) 272-3078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

DANNY W LEUNG
Examiner
Art Unit 2613

/D. W. L./
Examiner, Art Unit 2613
11/10/2008

/Kenneth N Vanderpuye/
Supervisory Patent Examiner, Art Unit 2613